DISSERTATION ON

"VALIDATION OF AGESS –SBO SCORING SYSTEM FOR THE PROGNOSIS AND OUTCOME OF SMALL BOWEL OBSTRUCTION"

Submitted in partial fulfilment of

Requirements for

MS DEGREE EXAMINATION

BRANCH- I GENERAL SURGERY

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

CHENNAI

INSTITUTE OF GENERAL SURGERY

MADRAS MEDICAL COLLEGE

CHENNAI -600003

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INTRODUCTION:

Small bowel obstruction represents a significant health care burden in the United States. SBO is a life threatening and surgical emergency condition. The only factor shown to decrease monitoring in various studies done so far is early surgical intervention. However it is difficult to differentiate from other acute abdomen condition. It may remain under diagnosed and untreated. AGESS – SBO SMALL BOWEL OBSTRUCTION (ACUTE GENERAL EMERGENCY SURGICAL SEVERITY) is the only scoring system available so far to help us towards making an accurate diagnosis. So scoring system which is easy to follow and cost effective method to estimate prognosis and outcome of SBO and ability to predict in Hospital complication, one such scoring (AGESS – SBO Scoring system is deviced by Patrice Wendling in 2015. Hence we would like to validate this scorig system in our patients for prognosis, severity and outcome of Small Bowel Obstruction).

[10,11,12,16]

4. MATERIAL AND METHODS

STUDY CENTRE

Institute of General Surgery, Madras Medical College and Rajiv Gandhi Government General Hospital, Chennai

ETHICAL COMMITTEE APPROVAL

Ethical committee clearance obtained from Institutional Ethical Committee of Madras Medical College held on 31.01.2017.

STUDY DESIGN

Hospital based observational study.

DURATION OF STUDY

February 2017 to September 2017 (8 Months)

STUDY POPULATION

Fifty patients

INCLUSION CRITERIA

1. Patients presenting to Rajiv Gandhi Govt. General Hospital with symptoms suggestive of Small Bowl Obstructions the study period.

5. RESULTS:

OVER THE STUDY PERIOD

A total of 50 patients were treated for SBO during the study period with mean age of 52 (+/- 5) yrs,

Women accounted for 46% and men accounted for 54% in the study period.

A total 46 patients 92% were managed operatively, whereas the remaining 4 patients 8% managed conservatively.

The most common cause for Small bowel obstruction was Adhesion – 46% (23 patients). The second most common cause for small bowel obstruction was obstructed Hernia – 20% (10), followed by Ilecaecal TB – 18%(9 patients), Intussusception/Volvulus-10%

(5 patients) and Tumours-6%(3 patients)

The median duration of hospital stay for

Complicated patients – 12.50 days

Uncomplicated patients – 11.61 days

The overall median AGESS SBO SCORE – 1.2 (Range 1-2)

6. DISCUSSION

The AGESS-SBO Score demonstrated acceptable association with small bowel obstruction.

This AGESS_SBO Score can be simple easily recognizable used in acute abdomen for small bowel obstruction. Ensure the broad adoption in physiology, anatomy and comorbidities and extended length of hospital stay, SBO complication and in hospital mortality.

Intra-operative finding like, viable small bowel were found to the statistically significant with management outcomes.

Mechanical SBO were most common obstruction in our study, whereas adynamic obstruction was less prevalent.

Intra-operative procedures like bowel resection and anastomosis have significant statistical association with management outcome. Bowel resection and anastomosis has a three times high risk of developing an unfavorable outcome compared with patients without resection and anastomosis of bowel.

Adhesion release and hernia reduction intra operatively also demonstrated a significant statistical association with management outcome. According to this study the common cases of SBO were mostly due to post operative adhesion followed by obstructed hernia. Whereas tumors ileo ceacal TB and volvulus was less prevalent.

Duration of illness before surgical intervention has significant statistical association with management outcome of patients. Patients who presented within 24 h duration of illness are less likely to develop unfavorable outcome compared with patients who presented after 24 h.

Our study also revealed that patient who stayed for less than 10 days were less likely to develop unfavorable outcomes compared with patents who stayed for more than 10 days.

The outcome of laparotomy might be affected by different factors, such as cause of obstruction, duration of illness, age, presence of peritonitis and complication detection time.

AGESS-SBO scoring system over the study period 72 patients were admitted to surgical ward of which 50 patients were admitted with diagnoses pertaining to acute abdomen – SBO.

The Study revealed that

S.No.	Age	Frequency	Percentage
1	21-30 years	2	4.0%
2	31-40 years	4	8.0%
3	41-50 years	14	28.0%
4	51-60 years	16	32.0%
5	61-70 years	10	20.0%
6	71-80 years	4	8.0%
Total		**50**	**100**

Gender Distribution in SBO

S.No.	Gender	Frequency	Percentage
1	Male	21	54.0%
2	Female	23	46.0%
Total		**50**	**100**

Treatment Distribution in SBO

S.No.	Treatment	Frequency	Percentage
1	Operative	46	92.0%
2	Non-Operative	4	8.0%
Total		**50**	**100**

Causes involved in SBO

S.No.	Causes	Frequency	Percentage
1	Adhesion	23	46.0%
2	Obstructed Hernia	10	20.0%
3	Ileo ceacal TB / Stricture	9	18.00%
4	Tumors	3	6.00%
5	Intussusception / Volvulus	5	10.00%
Total		**50**	**100**

Complication involved in SBO

S.No.	Complication	Frequency	Percentage
1	Complication	12	24.0%
2	Non-Complication	38	76.0%
Total		**50**	**100**

LOS (Length of Hospital Stay) in SBO

S.No.	LOS	Frequency	Mean Value Days
1	Male	27	11.56
2	Female	23	12.13
Total		**50**	

Prgnosis and Outcome of SBO

S.No.	Outcome	AGESS - SBO Score	P Value
1	Extended LOS	0.73 (0.68-0.78)	0.83
2	Hospital complication	0.7 (0.67-0.77)	0.38
3	Hospital Mortality	0.80 (0.75-0.84)	0.03

7. LIMITATIONS OF THE STUDY

1. Duration of the study is only for 8 months.
2. Study population is only 50 patients.
3. Collection of data including previous material from each patient were difficult.
4. AGESS – SBO did not enhance the AAST-SBO Prediction of extended hospital duration and in hospital complication.

8. CONCLUSION

The most common cause of small bowel obstruction in this study were Adhesion and obstructed hernia.

Delayed presentation, late diagnosis intraoperatively presence of bowel gangrene and AGESS-SBO >2 was associated with higher morbidity and mortality rate.

Validation of AGESS-SBO scoring system useful to work out a concept of multidisciplinary approach for planning and conducting diagnostic and therapeutic measures in this category of patients.

The main pathogenic cause leading to the development of polyorganic insufficiency and death of early post operative period is BIS (Bowel insufficiency Syndrome).

Laparotomy was the most common surgery of SBO management, while Adhesiolysis , bowel resection / anastomosis and intra-operative hernia reduction were the most common intra operative procedure. The most commonly encountered postoperative complications were gastro intestinal - ileus, SSI followed by Pneumoninfection and Electrolyte imbalance

Mean average Length of Hospital stay was 11.5 6 days.